

**REMARKS**

The present amendment is in response to the Office Action mailed December 1, 2004. Prior to entry of this amendment, claims 1-13 are pending. By this amendment, new claims 14-21 are added. No new matter is added.

Claims 1-21 are presented for prosecution.

Favorable reconsideration of this application is respectfully requested in view of the foregoing amendments and following remarks.

**Claims 1, 2, 4, 6-9, 12, and 13 Recite Patentable Subject Matter**

Claims 1, 2, 4, 6-9, 12, and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent No. 6,522,356 to Watanabe (hereinafter 'Watanabe') in view of United States Patent No. 5,592,575 to Nakazato (hereinafter 'Nakazato'). Applicant hereby traverses the rejection, as follows.

In making this rejection, the Office Action asserts that Watanabe discloses all of the features of claim 1 with the exception of "a first signal processing unit for generating output pixel signals by using signals based on the pixel signals, said first signal processing unit generating a part of output pixel signals directly from signals based on pixel signals of the color pixels of said one kind and generating another part of output pixel signals through interpolation process using signals based on pixel signals of color pixels of another of said at least three kinds." Nakazato is cited for allegedly curing the deficiencies of Watanabe.

In the first signal processing unit for generating output signals of claim 1, a part of the output pixel signals is generated directly from pixel signals of the color pixels of the one kind of color pixels. Another part of the output signals is generated through an

interpolation process using signals based on pixel signals of color pixels of another of the at least three kinds of color pixels. Therefore, in claim 1, each output pixel signal includes a signal taken directly from a color pixel of the one kind and a signal interpolated from another kind of color pixels. |

In contrast, Nakazato discloses performing an interpolation process such that the average of the sum of the pixel signals on rows above and below a row being read are added to the row being read and output with the row being read. Rows of Nakazato include color pixels of all three kinds, i.e., R, G and B color pixels. Thus, the output pixel signals of Nakazato include signals generated directly from all kinds of color pixels, not just one kind of color pixel.

Therefore, Nakazato fails to disclose or suggest the first signal processing unit for generating output pixel signals recited in claim 1. Specifically, Nakazato neither discloses nor suggests the first signal processing unit generating a part of output pixel signals directly from signals based on pixel signals of the color pixels of said one kind, as recited in claim 1.

Therefore, combining the signal processing unit of Nakazato with the solid state image pickup apparatus of Watanabe does not yield the invention recited in claim 1. Accordingly, claim 1 is neither anticipated nor rendered obvious by the combination of Watanabe and Nakazato.

Moreover, it is respectfully submitted that applying the interpolation method of Nakazato as disclosed at col. 4, lines 17-38, to the pixel array of Watanabe would not yield pixel signals having red, green, and blue color information. Therefore, using the

interpolation method of Nakazato in the pixel array of Watanabe would render both the method and the array unfit for their intended purposes.

In *In re Gordon*, it was held:

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Therefore, Applicant respectfully submits that there is no motivation to combine the teachings of Nakazato and Watanabe as suggested in the outstanding Office Action.

Section 2143.01 of the MPEP states:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)

Applicant respectfully submits that there is no suggestion in either Watanabe or Nakazato to make the suggested modification. Accordingly, it is respectfully submitted that claim 1 is neither anticipated nor rendered obvious by the cited combination.

For all of the above reasons, it is respectfully submitted that claim 1 is patentably distinct over the combination of Nakazato and Watanabe and in condition for allowance. As claims 2, 4, 6-9, 12, and 13 depend from claim 1, claims 2, 4, 6-9, 12, and 13 are allowable for the same reasons as claim 1, as well as for the additional subject matter recited therein. Accordingly, withdrawal of the rejection of claims 1, 2, 4, 6-9, 12, and 13 under 35 U.S.C. § 103(a) is respectfully requested.

**Claims 3, 5, 10, and 11 Recite Patentable Subject Matter**

Claims 3 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe in view of Nakazato and further in view of United States Patent No. 5,280,347 to Shiraishi (hereinafter, 'Shiraishi'), and claims 10 and 11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Watanabe in view of Nakazato and further in view of United States Patent No. 5,663,759 to Horng (hereinafter, 'Horng').

For all of the reasons explained above, Applicant respectfully submits that there is no motivation to combine the teachings of Watanabe and Nakazato. Furthermore, assuming *arguendo* that Watanabe and Nakazato were combined, the combination fails to disclose or suggest each and every feature recited in claim 1. Specifically, neither reference discloses or suggests a first signal processing unit generating a part of output pixel signals directly from signals based on pixel signals of the color pixels of said one kind, as recited in claim 1.

Neither Shiraishi nor Horng cures the deficiencies of Watanabe with respect to claim 1. Thus, claim 1 is neither anticipated nor rendered obvious by the combinations of Watanabe, Nakazato and Shiraishi or Horng.

Each of claims 3, 5, 10, and 11 depends from claim 1. Therefore, claims 3, 5, 10, and 11 are allowable for the same reasons as claim 1, as well as for the additional subject matter recited therein. Accordingly, withdrawal of the rejections of claims 3, 5, 10, and 11 under 35 U.S.C. § 103(a) are respectfully requested.

**New Claims 14-21 Recite Patentable Subject Matter**

Claims 14-16 depend from claim 1. As such, claims 14-16 are allowable for the same reasons as claim 1, as well as for the additional subject matter recited therein.

Applicant respectfully submits that independent claim 17 recites subject matter that is neither disclosed nor suggested by the cited art of record.

Claim 17 recites, in part;

a signal processing unit for generating output pixel signals by using signals of the color pixels, wherein said output picture signals are generated at each color pixel position and at each interstitial position.

Applicant respectfully submits that none of the cited references discloses or suggests generating output picture signals at each color pixel position and at each interstitial position. Rather, each of the cited references discloses generating output pixel signals at color pixel positions only. Thus, it is respectfully submitted that claim 17 is patentably distinct over the cited art of record and in condition for allowance.

Claims 18-21 depend from claim 17. Therefore, claims 18-21 are allowable for the same reasons as claim 17, as well as for the additional subject matter recited therein.

In view of the above, Applicant respectfully submits that claims 14-21 are in condition for allowance. An early and favorable action on claims 14-21 is therefore respectfully solicited.

### **CONCLUSION**

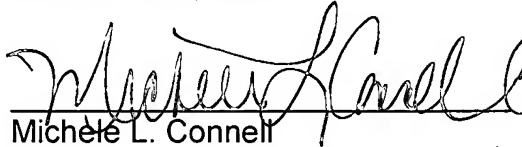
In view of the above amendments and remarks, Applicant submits that all pending claims are in condition for allowance, and favorable reconsideration of the application is respectfully requested.

Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is invited to contact the undersigned representative at the telephone number listed below.

In the event this paper has not been timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, **referencing docket number 107317-00038**

Respectfully submitted,

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